

Skill tester game



Task: To make a skill testing game using an electrical circuit.

What to do:

1. Push the pen into the shoebox to make four holes—A, B, C and D—as shown in Figure 1.
2. Tape one end of the 3-cm length of insulated wire to one end of the battery. Tape the other end of the wire to one side of the socket.
3. Tape one end of the 50-cm length of insulated wire to the free end of the battery.
4. Tape one end of the 80-cm length of bare wire to the free side of the socket.
5. Make a small loop from the 15-cm length of bare wire. You may need to use the wire clippers to help you. Join the loop to the free end of the 50-cm length of insulated wire and seal it with electrical tape.
6. Check Figure 2 to ensure that all your connections are correct. Add extra tape to make sure everything is secure.
7. Now you are ready to put your game together! Take the lid off the box. Put the battery, the socket and everything you have connected to them inside the box.
8. Poke the light bulb through hole A and into the socket. Poke the 80-cm length of wire up through hole B and shape it into a series of bends. Poke the loop through hole C and thread it onto the 80-cm length of wire. Push the end of the 80-cm length of wire into hole D and bend it securely inside of the lid so it doesn't slip.
9. Carefully put the lid of the shoebox back on. It should look like Figure 3. Play your skill tester game by trying to move the loop over the bent wire without touching it. How skilful are you?

Figure 1

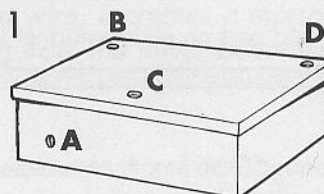


Figure 2

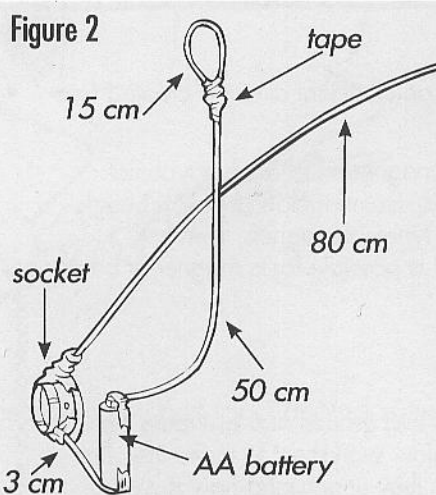
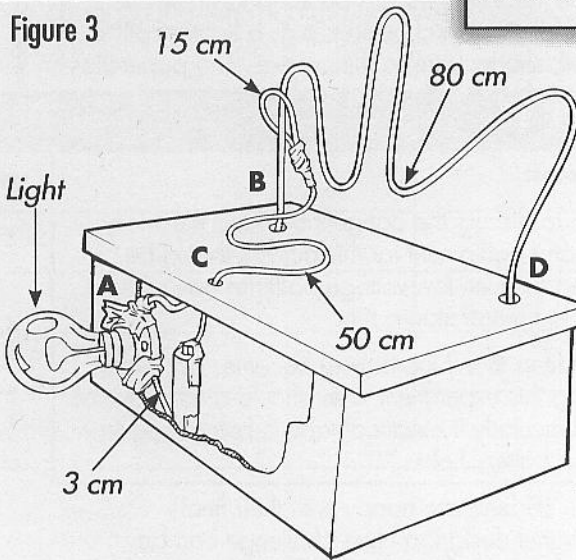


Figure 3



You will need

shoebox
electrical tape
15-cm length of flexible bare wire
80-cm length of flexible bare wire
3-cm length of insulated wire with both ends bared
50-cm length of insulated wire with both ends bared
wire clippers
pen
1.5 volt light bulb in a socket
scissors
AA battery

What happened?

1. What did or should have happened when the loop touched the wire?
2. Did your game work? Explain why or why not.

What I've learned

This game is an example of a _____ electrical circuit.